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The impact of mobile banking customer experience on loyalty among millennials in South Africa

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ABSTRACT

Banks need to remain competitive in the ever-changing business environment. Millennials are one of the largest customer segments with a large digital and mobile appetite; as a result, they form a natural target for banks. To increase their customer base, banks need to ensure that their customer experience strategy caters for these young customers in accordance with their expectations. This study explores factors that influence customer experience in mobile banking and how this experience influences customer loyalty to their bank. This study used a mixed-methods strategy and collected data from 344 mobile banking users via an online survey questionnaire and a further 10 semi-structured interviews were conducted. The research hypotheses were tested through regression analysis, whilst thematic analysis was used for open-ended questions in the survey and the 10 interviews. The results showed that convenience, ease of use and customization significantly influence customer experience in mobile banking. Customer experience was perceived to significantly influence customer loyalty.

Keywords

Mobile Banking, Customer Experience, Loyalty, Millennials.

INTRODUCTION

Over the last few decades, banks have embraced a growing number of technology-based service innovations over and above the traditional brick and mortar branches, for example, Automated Teller Machines ATMs or cash dispensers, automated phone banking, internet banking and, lately, mobile banking (Illia *et al.*, 2015; Silva *et al.*, 2013). Worldwide the number of mobile banking users has increased tremendously. This increase in the popularity

of mobile banking services among customers specifically the millennials has led to increased competitiveness in the banking sector. To seize and keep mobile customers, and to entice new users particularly millennials who see value in mobile services (Chuah *et al.*, 2014) and who eagerly embrace mobile services (Lella & Lipsman, 2014), banks must craft effective mobile strategies, emphasizing and supporting the benefits and worth of the mobile offerings (Laukkanen, 2016). Globally, the millennial cohort (those born between 1980 and 2000) represent a lucrative current and future market segment because they are relatively young and they make up greater than 25% of the global population (Nusair *et al.*, 2013), are very sociable, technology literate, and media /tech-savvy (Nusair *et al.*, 2013). The millennials are also perceived to be unpredictable and less loyal to a brand compared to their predecessors, the Gen X and Baby Boomers (Bilgihan, 2016; Wojcik, 2016). They are intolerant of bad brand experiences, which can immediately lead to loss of trust and patronage (Parris, 2010). Customers who are not loyal pose a challenge because loyal customers have a positive influence on a firm's revenue streams and profitability (Malhotra *et al.*, 2017). In today's competitive environment loyalty efforts are critical. Loyal customers on average spend 67% more than new customers (Abramovich, 2017). To address the need for customer loyalty, businesses and their brands must be adaptable and responsive to these significant changes by learning to make use of new digital ICT platforms to target millennial customers effectively (Bevan-Dye & Dondolo, 2014). Therefore, this study investigates how customer experience of mobile banking influences their loyalty towards the bank. Through conducting this research on millennials in South Africa, this study has expanded the knowledge of mobile banking research in the country. A valuable contribution was made by this study, as this study gave better insight into the factors that significantly influence the customer's experience of millennials in mobile banking. These findings provide important foundations for banking managers, marketers and executives of banks in South Africa to implement some strategies that help to improve the loyalty of millennial customers.

LITERATURE REVIEW

The usage of mobile banking services by traditional banking institutions in many countries is still very minimal despite its impressive benefits (Alalwan *et al.*, 2016; Malaquias & Hwang, 2016). If embraced, mobile banking could yield important results in developing countries where scores of consumers lack access to traditional banking services or are prohibited by the cost of such services (Gutierrez & Singh, 2013). Mobile banking has been found at a macro-level to positively influence "inclusive development" in developing countries (Asongu & Nwachukwu, 2018). To encourage mobile banking adoption and continuous usage, customer experience is perceived to be important. The creation of an exclusive customer experience is quickly becoming the key goal for differentiation (Srivastava & Kaul, 2016) and comes ready with the guarantee of a strong competitive edge and profitability (Martin *et al.*, 2015). The newest method of mobile banking, which is through mobile apps, has grown vastly popular throughout the world because of the surge in the usage of smartphones. Millennials are by far more eager to use mobile banking in comparison to other age groups, putting added significance on the improvement of this channel (Capgemini, 2016). They are usually the first to adopt and intensely use modern mobile technologies (Spaid & Flint,

2014) and possess a great influence on other cohorts with significant buying power (Duffet, 2015). Reports recently show that millennials are projected to spend greater than other generations due to their size, superior spending power, and their socialization in the process of consumption (Fleming, 2016). Thus, understanding millennials experiences of mobile banking would assist firms in their marketing strategy and enable them to offer loyalty programs. A research model that explores the factors that influence customer experience in the context of mobile banking is presented in Figure 1. The model postulates that convenience, ease of use, customization, enjoyment, brand trust, functional quality, satisfaction, perceived risk, social influence, demographic factors and personal innovativeness influence customer experience which in turn influences customer loyalty in mobile banking.

Convenience

Convenience from a mobile banking perspective is the ability to receive round the clock banking services in a way which is believed to be superior in comparison to the other alternative banking channels (Chawla & Joshi, 2017). The ability of customers to finish tasks efficiently in a manner that is suitable and satisfactory to them is referred to as convenience. Prior studies show that convenience is achieved when consumers can access mobile applications anytime and anywhere (Jun & Palacios, 2016; Shankar *et al.*, 2016). These studies have also demonstrated that convenience exerts a positive influence on customer experience (Garg *et al.*, 2014; Klaus & Maklan, 2013). Hence, this study hypothesizes that:

H1: Convenience of mobile banking applications positively influences customer experience.

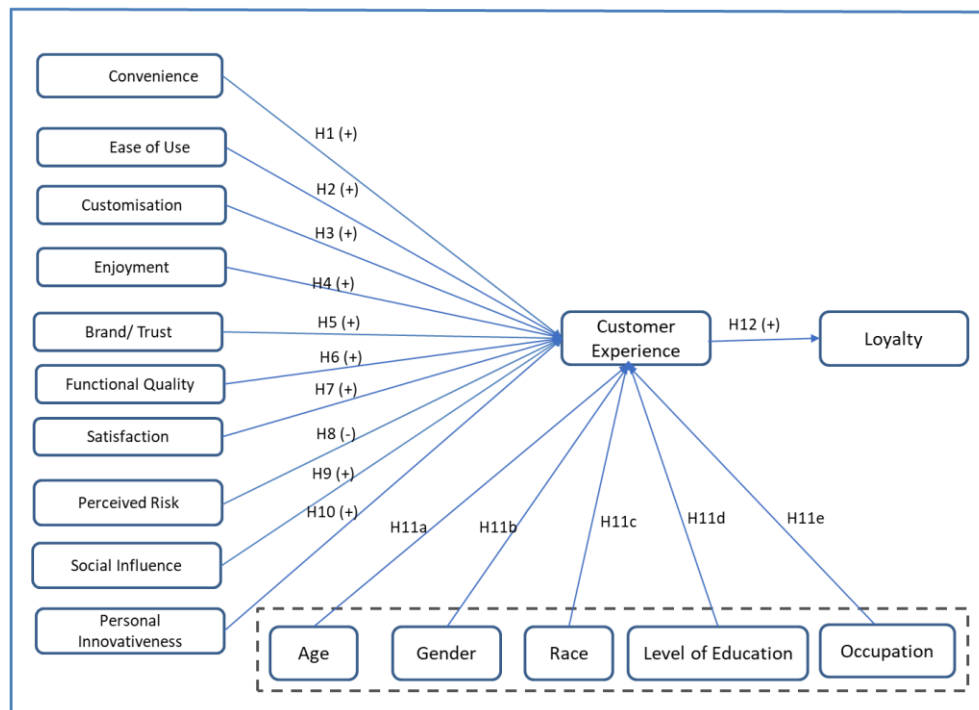


Figure 1: Conceptual Model

Ease Of Use

The ability to easily navigate through an app and finish intended tasks in a hassle-free fashion is referred to as ease of use. Looking at ease of use from a technological system perspective, it is centered on how the system permits a user/customer to do tasks, increase efficiency, output and performance (Chau & Lai, 2003) and is perceived to be a sign that a company understands, cares and respects its customers (Egger, 2001). A closely related dimension to ease of use is perceived usability – the ease of use, flexibility, simplicity, and user-friendliness (Alalwan *et al.*, 2016). Usability is identified as one of the important factors determining the adoption of mobile banking (Gu *et al.*, 2009) and leads to a positive experience (Mbama *et al.*, 2018). Thus, this study hypothesizes that: *H2: Ease of use (usability) of mobile banking applications positively influences customer experience.*

Customization

The capability to screen content, filter preferred content and create an experience that is unique to the needs of the client is known as customization. Customization enables customers to adapt products and services in accordance with what they prefer, while at the same also allowing service providers to suggest products or services that suit customers' choices (Xu *et al.*, 2014). Although some previous research distinguishes between customization and personalization, they both fulfil the goal of changing services to meet customer's needs (Ho & Bodoff, 2014). This research includes these two mechanisms as the element of a single construct of customization. According to Turel and Connelly (2013), the increasing role of technology has led to a surge in the usage of technology for the provision of customized services and can influence customer experience (Bilgihan *et al.*, 2015). Therefore, the study hypothesizes that: *H3: Customization of mobile banking applications influences customer experience.*

Enjoyment

The act of using a certain system that is enjoyable notwithstanding any performance concerns emanating from the usage of the system is referred to as enjoyment (Venkatesh, 2000). Enjoyment is associated with the intrinsic value which a customer experiences from their association with an online product or service. Customers anticipate mobile shopping services to serve their enjoyment and self-expression requirements (Shankar *et al.*, 2016). Customers are likely to be unsatisfied when they do not derive the hedonic aspect of enjoyment from the usage of mobile applications (Hsiao *et al.*, 2016). Prior studies report that consumers who do not experience enjoyment during online shopping will endeavour to finish the task at another provider (Faiola *et al.*, 2013). The study, therefore, hypothesizes that: *H4: Enjoyment of mobile banking applications positively influences customer experience.*

Brand Trust

In addition to enjoyment, trust in mobile banking has been cited as a vital aspect that determines customer perception and inclination to take up mobile technology (Alalwan *et al.*, 2016; Hanafizadeh *et al.*, 2014). Trust and

credibility conceptually overlap with each other and will be used interchangeably in this study (Adams *et al.*, 2010). The willingness of customers to remain invested with the bank reflects their trust in their banks. Such willingness in the customer emanates from the conviction that develops from their previous experiences with the bank's products and services. Trust is important for building long-lasting relations between organizations and customers, more so in the risk susceptible mobile and online banking channels (Berraies *et al.*, 2017). Consumers trust in a brand is reliant on their experience with that brand (Ramaseshan & Stein, 2014). With this background, the following hypothesis is proposed: *H5: Trust in the brand of mobile banking applications positively influences customer experience.*

Functional Quality

The functionality of online systems is also critical to online consumers. Monferrer-Tirado *et al.* (2016) maintained that functional characteristics determine both the satisfaction and trust perceptions of the bank customers that are projected to be extremely results-focused. The adoption of a mobile form of banking is influenced by functional quality (Lee & Chung, 2009). Other studies indicate that functional quality influences customer satisfaction, trust and loyalty (Monferrer-Tirado *et al.*, 2016). Garg *et al.* (2014) used online functional elements such as usability and interactivity to measure customer experience. Their findings show that these elements tend to have a major effect on the user's web experience. Therefore, the study proposes that: *H6: Functional quality of mobile banking applications positively influences the customer experience.*

Satisfaction

Apart from functionality, consumer satisfaction with the product is important. Satisfaction refers to a consumer's emotional state of happiness or regret that results from a comparison of the product performance in relation to their expectations (Kotler, 2000). The conceptualisation of satisfaction is in two forms namely transaction-specific and cumulative satisfaction. Transaction-specific satisfaction relates to a particular service encounter while cumulative satisfaction relates to complete overall encounter to date (Kaura *et al.*, 2015). In loyalty research, satisfaction is usually conceptualized as cumulative satisfaction (Harris & Good, 2004). The overall satisfaction is comparatively much more stable than transaction-specific satisfaction (Parasuraman *et al.*, 1994). On this basis, this research makes use of cumulative rather than transaction-specific satisfaction. According to Lian *et al.* (2012), customer satisfaction is the overall customer experience. Empirical evidence proves that the usage continuance of mobile banking for financial transactions is determined by the satisfaction derived from the previous experience encounters of consumers (Lassala *et al.*, 2010). Hence, this study hypothesizes that: *H7: Customer satisfaction in mobile banking applications positively influences the customer experience.*

Perceived Risk

When customers perform transactions online, there exist some forms of financial, product, social, psychological, performance and physical risks which are referred to as perceived risks (Wu & Wang, 2005). Perceived risk is one of the main dimensions that determine customer experience in digital banking (Mbama *et al.*, 2018). There is an increased risk in mobile banking because of remote connection (Hanafizadeh *et al.*, 2014). Perceived risk has a negative effect on repeat purchase behaviour and the potential to discourage transactions. Kim & Lennon (2013) agree with these results and have revealed that perceived risk exerts a substantial negative influence on emotions. Therefore, this study hypothesizes that: *H8: Perceived risk of mobile banking applications has a negative influence on customer experience.*

Social Influence

Prior studies have also highlighted that social influence influences customer adoption behaviour. According to Chou & Barron (2016), social influence is the extent that an individual believes that it is important for others to believe that she/he uses a new technology or conform to the expectations of others. Lemon and Verhoef (2016) suggest that customer experiences are increasingly social than previously. Therefore, the social element cannot be overlooked. In e-services context, social presence boosts customer perceptions of both website and the online relationship (Cyr *et al.*, 2007) and such interactions have an influence on customer experience especially in social density settings where interactions among numerous actors are frequent, for example in crowded cafes or active social media chat rooms. Hence, this study hypothesizes that: *H9: Social influence has a positive influence on customer experience in mobile banking.*

Personal Innovativeness

In information systems, personal innovativeness is defined as the desire of a person to explore new technology (Agarwal & Prasad, 1998). The degree that a person is willing to try out new functionality and other aspects of new technologies is called personal innovativeness (Chen & Dai, 2014; Yi *et al.*, 2016). Innovativeness is a strong psychological and cognitive force that plays an important role in the determination of customer experience (Amoroso & Ogawa 2013). Earlier studies have revealed that greater innovativeness in individuals is linked to positive attitudes and beliefs about technology (Ali *et al.*, 2016). Therefore, this study hypothesizes that: *H10: Personal innovativeness has a positive influence on the customer experience in mobile banking.*

Demographic Factors

Previous studies indicate that social, economic, and demographic factors influence consumer behaviour in e-commerce (Chauhan & Rambabu, 2017). Customer demographics are broadly used to differentiate how a segment of customers varies from another (Ndung'u, 2013). This study includes five demographic variables to account for any potential influence of these individual differences on the customer experience in mobile banking. These variables are age, gender, education, occupation, and race. According to Garg *et al.* (2014), there are significant differences among age groups on customer experience dimensions and the gender dimension where men and women

experience customer experiences differently (McGovern, 2013). Another important factor is education. According to Alafeef et al. (2011), there is an important relationship between education level and mobile banking adaptation. In an online shopping context, empirical findings reveal that better-educated persons have a greater likelihood to favour online shopping (Kim & Lennon, 2013). However, research which examines education as an independent variable in investigating customer service experience quality components is scarce (Speziale & Carpenter, 2007). Hence, this study hypothesizes that: *H11: demographic factors of age (H11a), gender (H11b), race(H11c), education (H11d) and occupation (H11e) will influence how customers experience mobile banking.*

Loyalty

The leading goal for all businesses which has always been the major focus of marketing is customer loyalty (Toufaily *et al.*, 2013). Jang and Ha (2014) propose two elements of customer loyalty: attitudinal loyalty and behavioural loyalty. The customers desire to re-purchase or recommend is reflected by attitudinal loyalty, while the actual behaviour like how many times a customer has repurchased is measured by behavioural loyalty. In a banking environment, loyalty is when internet banking users consistently revisit their banking website to perform a financial transaction or request financial information (Rahi & Ghan, 2016). According to Suhartanto *et al.* (2018) loyal consumers are inclined to purchase more than freshly acquired customers, refer new customers to the company, pay the best prices and lower operating costs. Loyal customers demonstrate affection and obligation to the business and are not easily lured by competitor offerings (So *et al.*, 2013). The success of a business relies on customer loyalty (Kim *et al.*, 2015). Loyal customers are less likely to switch to competitor offerings (Santouridis & Trivellas, 2010) and loyalty is the foundation of a sustainable competitive edge (Makanyeza, 2015; Tarus & Rabach, 2013). Other studies have also shown that customer experience influences customer satisfaction, attitudinal and behavioural loyalty and word of mouth (Srivastava & Kaul, 2016; Brun *et al.*, 2017). Therefore, effective management of customer experience is an essential recipe for the establishment of customer loyalty (Crosby & Johnson, 2007) since a positive indelible experience is strongly associated with loyalty predictor. With this understanding, the following hypothesis is put forward: *H12: Customer experience of mobile banking applications positively influences customer loyalty.*

METHODOLOGY

The population for this study is mobile banking customers of the major retail banks operating in South Africa. These banks have been offering mobile banking services to their customers for a long period and they are the leading banks in South Africa that are aggressively promoting mobile banking services to their customers. The sample frame was drawn from millennials between the ages of 18 to 39 years old who are customers of mobile banks in South Africa. Reviewing previous literature on mobile banking/applications demonstrates that for most studies the sample size that ranges from 200-600 respondents is used. The quantitative sample for this study consisted of more than 200 customers of mobile banks in South Africa (Western Cape and Gauteng province) who were identified via

a random sampling approach. The province of Gauteng and Western Cape were chosen for this study as there are regarded to be the most cosmopolitan provinces in South Africa, with population dynamics that reflect that of the whole country (Maduku, 2016). Quantitative data was collected using a survey and administered as an online survey questionnaire. A standard self-administered questionnaire was developed and guided by the conceptual framework from Figure 1. All the variables used in this study were informed by previous studies. The questionnaire responses options are based on a five-point Likert scale that ranges from strongly disagree to strongly agree. For reliability and validity purposes, pre-testing and pilot studies of the survey were conducted with a small part of the population. The questionnaire was pretested amongst 20 participants who have been making use of mobile banking to examine the scales' reliability, phrasing, order of the questions, and the easiness with which the respondents comprehend the meaning of the questions. As a result, some questions were rephrased for better understanding. In addition, open-ended questions were included in the survey to garner information about the millennial's perceptions of customer experience and loyalty that they derived from the using mobile banking applications. The data was captured and analysed via a statistical software package - SPSS. Reliability data analysis show a Cronbach's Alpha of 0.888 for 43 questions. Factor analysis was conducted to determine the relationship patterns that exist among the independent variable of customer experience and the dependent variable of loyalty. The study used the Principal Components Analysis (PCA) method to extract factors. The study opted to display the coefficients sorted by size and suppress coefficients with absolute values that are less than an absolute value of 0.4. The first output from the factor analysis was the correlation matrix which showed the highest correlation coefficient of 0.732 between Convenience2 and Convenience3. The rest of the coefficients were below 0.732. Looking at the significant levels, most of the relationships were significant at either level 0.01 or 0.05. The second output from the PCA factor analysis was the Kaiser-Meyer-Olkin (KMO) and Bartlett's test. The KMO result shows a value of 0.899 – a value that falls within the acceptable range. A value close to 1 indicates that patterns of correlations are relatively compact and so factor analysis should yield distinct and reliable factors. Values greater than 0.5 are acceptable (Kaiser, 1974; Hutcheson & Sofroniou, 1999).

The third output from SPSS is the total variance explained output. This output lists the Eigenvalues associated with each linear component (factor) before extraction, after extraction and after rotation. Before extraction SPSS identified 36 linear components within the data set. The eigenvalues associated with each factor represent the variance explained by that linear component. Table 1 indicates the Eigenvalues in terms of the percentage of variance explained. This means that factor 1 explains 29.208% of the total variance. The cumulative percentage column indicates the combined percentage of variance explained by the current factor and the rest of the factors before it. Table 1 shows that factors 1 to 8 explain a combined 64.102% of the total variance. The rest of the factors will collectively explain the 35.9% variance; individually these factors insignificantly explain the variance. Hence, we will settle for an 8 factor (component) study. SPSS also extracts all factors with Eigenvalues greater than 1 shown by the middle column '*Extraction Sums of Squared Loadings*' and Table 1 shows that eight factors have their Eigenvalues values greater than 1. Their Eigenvalues are the same as the eigenvalues shown in the column

'Initial Eigenvalues'. After rotation, the 8 factors explain relatively almost equal variance. Factor 1 explains 8.038% while factor 2 explains 3.014% of the variance. The percentage differences are now closer to each other due to the optimisation done by rotation. The last output was the rotated pattern matrix table shown in Table 2. A minimum factor loading equal to or greater than 0.4 criteria was used to purify the measurement items (Clossey *et al.*, 2019). Furthermore, according to Ford *et al.* (1986) all item loadings greater than 0.4 represent a level commonly considered significant. It is important to note that, the study excluded from the output the factors that had a factor loading less than 0.4 and this explains the gaps in the table. Also, the output has been sorted or arranged according to the size of the factor loadings. It is important to note that, 12 factors load over component 1, with 6 of them loading highly with a factor loading above 0.60. Component 2 had 3 factors loading on it with all three highly loading with a value above 0.7. Component 3 had 4 factors loading on it of which 3 had values ranging from 0.767 and 0.716. Component 4 had 3 factors loading on it with all factors having factor loadings above 0.6. Component 5 had 4 factors loading over it of which all of them had negative factor loadings. Component 6, component 7 and component 8 had three factors each loading over them. Component 6 had one negative factor loading; component 7 had all negative factor loadings while component 8 had all positive factor loadings. After analysis, changes were made to the conceptual framework. The discarded construct item out of all the 36 questions (construct items) was *Trust1* as its factor loading was less than 0.4 and was therefore not associated with any component. Hypothesis testing was performed using regression analyses for either accepting or rejecting the hypotheses. Both independent variables of customer experience and dependent variables of loyalty are grouped and tabulated into SPSS for hypothesis testing.

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	10.515	29.208	29.208	10.515	29.208	29.208	8.038
2	3.087	8.576	37.784	3.087	8.576	37.784	3.014
3	2.315	6.432	44.216	2.315	6.432	44.216	4.547
4	1.757	4.879	49.095	1.757	4.879	49.095	3.372
5	1.588	4.410	53.505	1.588	4.410	53.505	4.400
6	1.394	3.871	57.376	1.394	3.871	57.376	2.542
7	1.313	3.646	61.022	1.313	3.646	61.022	2.919
8	1.109	3.080	64.102	1.109	3.080	64.102	4.419
9	.989	2.748	66.850				
10	.908	2.522	69.371				
11	.830	2.305	71.676				
12	.803	2.231	73.907				
13	.706	1.962	75.868				
14	.673	1.869	77.737				
15	.610	1.695	79.432				
16	.563	1.564	80.997				
17	.530	1.473	82.470				
18	.509	1.413	83.883				
19	.483	1.342	85.225				
20	.459	1.274	86.499				
21	.445	1.235	87.734				
22	.424	1.178	88.912				
23	.391	1.087	89.999				
24	.364	1.012	91.012				
25	.358	.994	92.006				
26	.342	.949	92.955				
27	.328	.911	93.866				
28	.311	.863	94.729				
29	.284	.790	95.519				
30	.282	.782	96.301				
31	.263	.730	97.031				
32	.253	.704	97.735				
33	.232	.646	98.381				
34	.220	.611	98.991				
35	.183	.509	99.500				
36	.180	.500	100.000				
Extraction Method: Principal Component Analysis.							
a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.							

Table 1: Total Variance

	Component							
	1	2	3	4	5	6	7	8
FunctionalQuality3	.758							
CustomerExperience2	.747							
FunctionalQuality1	.746							
Satisfaction1	.694							
Satisfaction2	.691							
FunctionalQuality2	.662							
CustomerExperience3	.593							
Trust3	.580							
CustomerExperience1	.527							
Satisfaction3	.489							
Trust2	.472							
Enjoyment3	.414							
Trust1								
PersonalInnovativeness3		.915						
PersonalInnovativeness2		.838						
PersonalInnovativeness1		.775						
Convenience1			.767					
Convenience2			.721					
Convenience3			.716					
Enjoyment1			.459					
Loyalty1				.828				
Loyalty3				.817				
Loyalty2				.773				
Customization3					-.722			
Customization1					-.653			
Customization2					-.646			
Enjoyment2					-.491			
PerceivedRisk1						.827		
PerceivedRisk3						.799		
PerceivedRisk2						-.455		
SocialInfluence3							-.745	
SocialInfluence1							-.716	
SocialInfluence2							-.508	
EaseOfUse1								.801
EaseOfUse3								.692
EaseOfUse2								.679
Extraction Method: Principal Component Analysis.								
Rotation Method: Oblimin with Kaiser Normalization.								
a. Rotation converged in 18 iterations.								

Table 2: Rotated Pattern Matrix

FINDINGS

Respondents for the study were millennials between the ages of 18 to 39 years old who are customers of mobile banks in South Africa. The survey was completed by 412 respondents. However, only 344 responses were recorded as completed responses. From the completed respondents, 60% of them identified as female, while 39% identified as male. When it came to race, those who identified as black had the highest representation of 41%. This was followed by respondents who identified as white (30%). Those who identified as coloured were 17%, Indian at 8% and those who prefer not to be identified were 4%.

The majority (48%) of respondents were in the age group of 18-23. This was followed by the 24-29 age group which had a representation of 22% and the age group 30-35 years (21%). The least represented age group was 36-39 with a total of 9% of the total sample. It is important to note that, these statistics show a decreasing trend in terms of representation from the youngest to the oldest. This result suggests that younger people are willing to participate in research studies than their older counterparts, or the young ones use mobile banking apps more than their older

counterparts. With regards to the education level, the results show that the least (9%) qualification was a diploma or college graduate. The rest of the qualifications of high school or lower, bachelor's degree and postgraduate or higher had an almost equal representation of 28%, 31% and 32% respectively. When it came to occupation, the majority were students (58%) and those employed were 34%. Unemployed participants and business owners had the least representation of 5% and 3% respectively. Participants were asked to indicate which bank's mobile banking app they use. The results show that Bank-C had the highest number of users at 34%. This was followed by Bank-D at 22%. Bank-E, Bank-B, and Bank-A had an almost equal representation of 16%, 13% and 11% respectively. A few of the respondents (4%) did not have their banking app as part of the options hence they had to specify. Further, most of the respondents (53%) used the mobile app on weekly basis. This was followed by 36% who indicated that they use their mobile banking app daily. The rest of the participants (11%) rarely use the banking app.

Construct	Item	Frequency	Percent	Cumulative Percent
Gender	Male	133	38.7	38.7
	Female	206	59.9	98.5
	Prefer not to say	5	1.5	100.0
Age	18-23	165	48.0	48.0
	24-29	75	21.8	69.8
	30-35	72	20.9	90.7
	36-39	32	9.3	100.0
Education level	High school/lower	96	27.9	27.9
	Diploma/College graduate	30	8.7	36.6
	Bachelor's degree	108	31.4	68.0
	Postgraduate/Higher	110	32.0	100.0
Bank	Bank A	38	11.0	11.0
	Bank B	43	12.5	23.5
	Bank C	118	34.3	57.8
	Bank D	74	21.5	79.4
	Bank E	54	15.7	95.1
	Other. Please specify	17	4.9	100.0
Mobile Frequency Use	Daily	125	36.3	36.3
	Weekly	183	53.2	89.5
	Monthly	31	9.0	98.5
	A few times a year	1	.3	98.8
	Less often	4	1.2	100.0
Race	White	103	29.9	29.9
	Black	140	40.7	70.6
	Coloured	60	17.4	88.1
	Indian/Asian	29	8.4	96.5
	Prefer not to say	12	3.5	100.0
Occupation	Unemployed	16	4.7	4.7
	Employed	119	34.6	39.2
	Business Owner	9	2.6	41.9
	Student	200	58.1	100.0

Table 3: Frequency of demographic factors

	N	Mean	Skewness	
	Statistic	Statistic	Statistic	Std. Error
EaseOfUse	344	4.3246	-1.357	.131
PerceivedRisk	344	3.0640	.411	.131
SocialInfluence	344	3.5649	.004	.131
PersonalInnovativeness	344	2.8934	.212	.131
Convenience	344	4.3452	-2.077	.131
Customization	344	3.4571	-.134	.131
CustomerExperience	344	3.9448	-.623	.131
Loyalty	344	3.5921	-.146	.131

Table 4: Descriptive Statistics of factors (Items = 344)

Construct	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Age	1												
2 Gender	.209**	1											
3 Education	.439**	.046	1										
4 Race	-.029	.102	-.033	1									
5 Occupation	.609**	.104	.248**	.044	1								
6 Ease of Use	.117*	.013	.131*	.079	-.068	1							
7 Perceived Risk	.074	.082	-.066	.044	-.057	.009	1						
8 Social Influence	.034	.110*	-.038	.123*	-.010	.159**	.178**	1					
9 Personal Innovativeness	.137*	.095	-.079	.056	.152**	.122*	.202**	.327**	1				
10 Convenience	-.016	.078	.041	.027	.026	.592**	-.083	.210**	.063	1			
11 Customization	.165**	.029	-.008	.014	.148**	.405**	.124*	.316**	.277**	.468**	1		
12 Customer Experience	.018	.100	-.051	.013	-.005	.439**	-.010	.251**	.105	.533**	.499**	1	
13 Loyalty	.035	.048	.032	.090	-.030	.191**	.070	.188**	.047	.196**	.280**	.343**	1

** . Correlation is significant at the 0.01 level (2-tailed).
* . Correlation is significant at the 0.05 level (2-tailed).

Table 5: Pearson correlation matrix between constructs

The descriptive statistics are presented in Table 4. The findings show that all factors except for perceived risk and personal innovativeness had a mean value of 4, implying that most respondents agreed that, all factors influenced mobile banking except for perceived risk and personal innovativeness. Specifically, the most significant factors perceived to influence the use of mobile banking apps were convenience, ease of use and customer experience (the factors with the highest mean values), followed by social influence and customisation. Respondents were neutral (mean value of 3) with regards to perceived risk. They however slightly disagreed that personal innovativeness is an influencing factor of mobile application adoption and usage. The implications of these findings are that ease of use, convenience, customization, customer experience and loyalty results in participants favouring the use of mobile banking.

Pearson correlation was used to analyse the relationships between constructs. SPSS was used to extract the Pearson Correlation Matrix and the results are shown in Table 5. A correlation coefficient is a number which indicates the degree of relationship between two variables and it lies between -1.00 and +1.00 (Pallant, 2013). The direction of a relationship is depicted by the plus or minus sign whereby a negative value indicates an inverse relationship, that is, as one construct increases the other construct decreases while on the other hand, a positive value indicates a direct relation between both variables meaning as one construct increases the other construct also increases. A correlation value of 0 means that there is no correlation between the two variables and a correlation value of 1 means there is a perfect relationship between the two constructs. SPSS provides correlations at 0.01 and 0.05 significant levels. A correlation at 0.01 is shown by two asterisks appended to the front of the correlation figure and it means that the relationship is highly correlated while a correlation at 0.05 is shown by a single asterisk in front of the correlation figure and it means the relationship is moderately correlated. The results indicate that the relationship between the dependent variable (*Loyalty*) and *Customer Experience* was found to be 0.343 a significant correlation at level 0.01. This implies that *customer experience* is highly correlated to *loyalty*. When it comes to the

relationship between the mediator variable *Customer Experience* and the rest of the independent constructs, *Perceived Risk* and *Personal Innovativeness* were found significant at level 0.01. The relationship between perceived risk, customer experience and between customer experience and personal innovativeness were found insignificant. Of the hypothesised relationships, the relationship between *Convenience* and the mediator variable *Customer Experience* had the highest correlation of all with a value of 0.533 at level 0.01. This implies that the respondents associate the convenience of mobile banking apps with customer experience. The next high correlation value was between customization and the mediator variable customer experience at a value of 0.499. The third highest correlation existed between the mediator variable and *Ease of use* that had a Pearson correlation value of 0.439 at level 0.01. Pallant (2013) identifies moderate relationships between constructs as those with a Pearson correlation of above 0.3 and below 0.7. In this study, moderate relationships were found to be between the following constructs: *convenience* and *customer experience*; between *customization* and *customer experience* and finally, between *ease of use* and *customer experience*. The rest of the hypothesised relationships were considered weak as they had Pearson correlation values below 0.3.

A correlation matrix is enough to investigate the relationship between two constructs only, but when one desires to investigate a collective influence of various factors towards a dependent variable correlation is not enough. Statistical analysis methods such as Chi-square and linear regression should be employed. This study used linear regression from SPSS. Because linear regression works with one dependent variable, the study conducted 2 separate regression models: one between the mediator variable customer experience and loyalty and the rest of the independent variables and customer experience. The results of the regression model between *customer experience* and *loyalty* with *loyalty* as the dependent variable show that only 11.8% variance in the dependent variable can be explained by *customer experience* with an R Square value of 0.118. We can infer that *customer experience* explains 11.8% of the customer *loyalty* to a certain bank and the relationship between *customer experience* and *loyalty* is significant. The results of the regression model between customer experience and the rest of the independent variables show that the independent variables explain 39.4% of customer experience (R Square value = 0.394).

The results, as depicted in Table 6 show that ease of use, convenience and customization are the only variables that significantly contribute or predict customer experience (Sig statistic < 0.05). The rest of the variables were insignificant. The unstandardized coefficients column shows that the b statistics for the two significant variables (ease of use, convenience, and customization) was 0.150, 0.301 and 0.252. The regression models explain that loyalty is directly predicted by customer experience and indirectly predicted (through customer experience) by ease of use, convenience, and customization.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	.935	.336		2.781	.006
	Age	.018	.039	.028	.469	.640
	Gender	.092	.059	.070	1.565	.119
	Education	-.048	.028	-.086	-1.752	.081
	Race	-.004	.028	-.006	-.146	.884
	Occupation	.015	.035	.024	.434	.665
	EaseOfUse	.150	.055	.150	2.729	.007
	PerceivedRisk	-.035	.050	-.032	-.708	.480
	SocialInfluence	.073	.044	.080	1.656	.099
	PersonalInnovativeness	-.022	.034	-.031	-.652	.515
	Convenience	.301	.060	.289	5.008	.000
	Customization	.252	.046	.290	5.468	.000

a. Dependent Variable: CustomerExperience

Table 6: Regression coefficients between customer experience and the independent variables

Hypothesis	Construct	Sig. Value	Resolution
Hypothesis 1	Convenience → Customer Experience	p < 0.000	Accepted
Hypothesis 2	Ease of use → Customer Experience	p < 0.007	Accepted
Hypothesis 3	Customization → Customer Experience	p < 0.000	Accepted
Hypothesis 4	Perceived Risk → Customer Experience	p > 0.480	Rejected
Hypothesis 5	Social Influence → Customer Experience	p > 0.099	Rejected
Hypothesis 6	Personal Innovativeness → Customer Experience	p > 0.515	Rejected
Hypothesis 7	Customer experience → Loyalty	p < 0.000	Accepted
Hypothesis 8a	Age → Customer Experience	p < 0.640	Rejected
Hypothesis 8b	Gender → Customer Experience	p < 0.119	Rejected
Hypothesis 8c	Occupation → Customer Experience	p < 0.665	Rejected
Hypothesis 8d	Race → Customer Experience	p < 0.884	Rejected
Hypothesis 8e	Education level → Customer Experience	p < 0.081	Rejected

Table 7: Hypothesis testing

Using the significant statistics from regression analysis, three hypotheses were accepted as their significant values were below 0.05. These include convenience, ease of use and customization as factors that significantly influence customer experience. The findings also show that customer experience of mobile banking has a significant influence on customer loyalty. That is, if mobile banking provides increased convenience to the customer; it is easier to use for the customers or the customers get customized features, then this has a positive influence on the customer experience of millennial customers, resulting in the customers becoming more loyal to their bank. These findings are summarised into a research model presented in Figure 2.

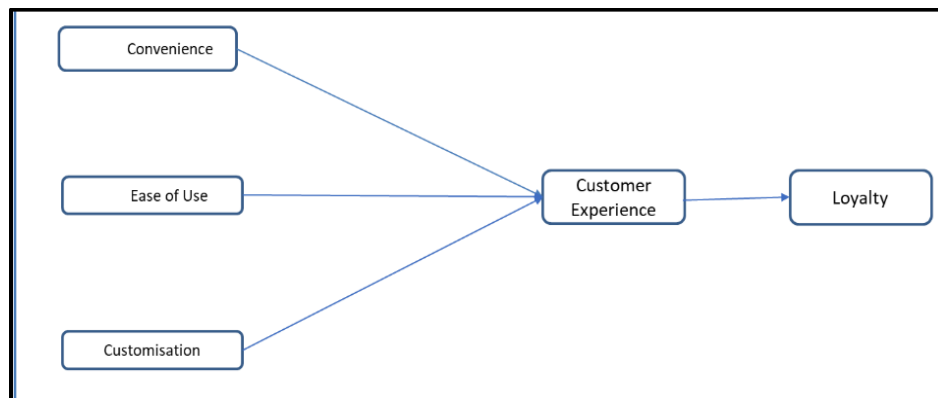


Figure 2: Mobile Banking Customer Experience Model

DISCUSSION

Table 7 shows the hypothesis testing results. The relationship between convenience and customer experience (H1) was found to be positive and statistically significant therefore showing support for the above hypothesis. The regression analysis shows that there is a positive relationship between convenience and customer experience meaning that as convenience offered by mobile banking increases so will the customer's experience. In the analysis of the open-ended questions, most of the respondents consider convenience to contribute the most to customers' experience as one of the respondents explains: *"I want to have a convenient app that is safe and helps me perform the financial tasks that I need to execute without having to physically go to the bank"*. According to another respondent, convenience was key to a better customer experience: *"I work long hours and attend school; therefore, I need a convenient way of performing my banking"*. These results echo those of McLean *et al.* (2018) that there is a direct relationship between utilitarian factors (ease of use, convenience, and customization) and the customer experience. These findings imply that convenience has a significant influence on the customer experience of millennial mobile banking customers.

The findings show that there is a statistically significant relationship between ease of use and customer experience and thus hypothesis 2 is supported. One of the respondents from the open-ended question stated that *"Ease of use is important to me; you do not have to be literate to use the Mobile Banking App"* and similar comments are made by respondent X7 in the interviews: *"Mobile banking needs to be easy to use for both the elderly and all the youth despite their education level"*. These findings add value to literature by confirming that ease of use is significantly positively associated with customer experience (McLean *et al.*, 2018; Mbama *et al.*, 2018). These findings imply that a mobile banking application that is easy to use significantly influences the customer experience of millennial banking customers. The association between customization and customer experience (H3) was tested through regression testing. This association was found to be statistically significant thereby supporting hypothesis three. This is further supported by the open-ended survey results as confirmed by one of the respondents: *"The banking app needs to offer me products based on my specific spending habits or offering me special interest rates in app given my banking history information"*. This finding is consistent with Loureiro and Ferreira (2017) who found that personalized services together with excellent performance are an important concern for millennials in the banking industry.

Hypothesis 4 was not supported as the relationship between perceived risk and customer experience was found to be statistically insignificant. This implies that when it comes to millennials, perceived risk does not influence mobile banking customer experience. These results contradict literature such as Jun and Palacios (2016) that found security to influence service quality of mobile banking. A possible reason for the lack of support could be the fact that most millennials tend to be technologically savvy and are aware of online security concerns when compared to the older generation; and have determined that the perceived benefits outweigh the risks. Although the hypothesis was not supported, the open-ended survey results did show that risk was a concern to some participants, for example, one

respondent stated that: "*Mobile banking app must have an active monitoring mechanism to recognise/detect unfamiliar activities then notify the user immediately*". Another respondent expressed their concern of fear of loss of money through cybercrime: "*Loss of money through cyber-crime will be my worst customer experience in my opinion*". Thus, although this hypothesis was not supported, this study acknowledges these contradictions and the differences in literature.

The relationship between *social influence* and *customer experience* (H5) was found to be statistically insignificant therefore this hypothesis was not supported. Furthermore, social influence did not emerge as a factor that influences customer experience in the open-ended survey. Brun *et al.* (2017) explain that social influence was found to be more evident in a physical environment and was not relevant in some online environments. Chaouali *et al.* (2016) also found that social influence does not significantly positively influence a customer's trust in the physical bank and the web-based banking context. Additionally, Rajaobelina *et al.* (2018) found that the social dimension of mobile experience does not positively impact commitment. The relationship between *personal innovativeness* and *customer experience* (H6) was found not to be statistically significant therefore this hypothesis was not supported. The participants in the open-ended questions did not highlight personal innovativeness as an influencer of customer experience. One of the reasons given by one participant is that they are not keen on trying out or experimenting with new technology, "*Personal innovativeness is the least important to me, I am not keen on trying out new technology and I am not trying to be creative*". The findings are in contrary to Anwar (2018) who stated that customer/personal innovativeness strengthens the effect of perceived value on the actual mobile commerce use, meaning that the level of innovativeness of a customer plays a vital role towards both their perception and behaviour towards mobile commerce. The relationship between customer experience and loyalty (H7) was found to be statistically significant. Findings from the open-ended questions also showed support for the hypothesis with one of the respondents indicating that: "*If I have a great mobile banking experience, I am less likely to switch to another bank, hence will be more loyal to my bank*"; and another respondent explaining that: "*My experience with my bank app determines my loyalty to my bank I can't think of switching to any other bank if my bank app satisfies my needs*". These findings are consistent with existing literature (Chahal & Dutta, 2015; Huang *et al.*, 2019). The research results do not show support for hypothesis 8 (Demographic factors influence how customers experience). The possible explanation can be that most respondents in this study were either students, business owners or employed therefore they have higher chances of accessing technology in comparison to the unemployed. Additionally, most respondents were educated with at least a college diploma and higher therefore they possess the skills necessary to use technology. Similar findings are reported by Mbama *et al.* (2018) who found that customer digital banking experience in the UK is not dependent on demographic factors.

CONCLUSION

Most businesses struggle to take advantage of the digital landscape to meet their customers' expectations and because of considerable changes in mobile banking and customers' expectations, researchers and practitioners are eager to comprehend the factors that lead to a captivating mobile banking experience and ultimately loyalty. The purpose of this research was to examine how customer's experience of mobile banking influences their loyalty towards the bank. This research findings show that customer experience possesses a significant influence on the loyalty of millennials towards their mobile bank; and this experience was influenced by the ease of use, convenience, and customization of mobile banking application. The study contributes to theory in the field of information systems by proposing a model for customer experience in mobile banking. The proposed model explains the important factors that influence customer experience and how customer experience within a mobile banking context influences the loyalty of banking customers (millennials). It provides researchers with the specific factors that better theorize and explain customer experience in mobile banking including how it influences customer loyalty. Secondly, the findings provide important foundations for banking managers, marketers, and executives of banks in South Africa to implement some strategies that help to improve the loyalty of millennial customers.

For future work, more studies could be done to further explore the relationship between perceived risk and mobile banking customer experience of millennials. Furthermore, the study can be extended by testing the conceptual model in other developing countries in Africa with diverse cultural backgrounds to conduct a cross-cultural comparison of these findings. Africa is one of the continents where mobile banking and mobile payments are advantageous because of the large population of people living in remote areas.

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